

REMARKS

Favorable consideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-54 are pending in the application, with Claims 1, 9, 12, 19, 22, 25, and 28 amended by the present amendment.

In the outstanding Office Action, Claims 1-18, 22-27, 31-42, and 46-51 were rejected under 35 U.S.C. § 102(e) as being anticipated by Hoffert et al. (U.S. Patent No. 6,374,260); Claims 19-21, 28-30, 43-45, and 52-54 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffert in view of U.S. Patent No. 5,995,707 to Lee.

Claims 1, 9, 12, 19, 22, 25, and 28 are amended to more clearly describe and distinctly claim Applicants' inventions. Support for these amendments is found in Applicants' originally filed specification. No new matter is added.

Briefly recapitulating, amended Claim 1 is directed to an image information describing method. The method includes sampling a video information file, including video frames, with a variable time interval parameter and a variable size parameter to obtain thumbnail frames for the video information file. The method also includes describing attribute information of the thumbnail frames for specifying each of the video frames corresponding to each of the thumbnail frames as thumbnail information. The attribute information includes position information indicative of a position of the video frame corresponding to the thumbnail image on a time axis and size information of the thumbnail image. Independent Claims 9, 12, 19, 22, 25, and 28 are directed to alternative embodiments, each reciting the use of attribute information that includes position information indicative of a position of the video frame corresponding to the thumbnail image on a time axis and size information of the thumbnail image. The advantage of thumbnail frames is that thumbnail

frames are smaller than the original video information in data size and, thus, are more easily stored and manipulated for video summarization. By suitably setting the time interval and size of a sample, the thumbnail frames can more suitably reflect the contents of *variable* speed video information (e.g., MPEG 2) than conventional scene-change based sampling.<sup>1</sup>

Hoffert discloses a method and apparatus for uploading, analyzing, searching, and displaying multimedia files based on the content of the multimedia files, to include creating preview filmstrips.<sup>2</sup> However, contrary to the statement in the Official Action, Hoffert does not disclose or suggest “sampling video information... with a variable time interval parameter and a variable size parameter to obtain thumbnail frames” as recited in amended Claim 1. Instead, Hoffert discloses sampling a filmstrip at temporal width (TW) points, which is based on the length of time of the filmstrip (T) and the number of filmstrip frames to be displayed (N), as thumbnail images, the temporal width (TW) being constant for each media object (content).<sup>3</sup> N frames from the image are then decompressed to pure RGB at N fixed points in the image where the N fixed points at TW, 2\*TW, 3\*TW, ... N\*TW. Applicants submit that even if TW and N are variable, the frames of one object are not sampled with a variable time interval parameter and a variable size parameter. Thus, Applicants again submit that Hoffert does not teach or suggest “sampling video information ... with a variable time interval parameter and a variable size parameter to obtain thumbnail frames.”

Hoffert also discloses the use of attribute information for specifying each of the video frames.<sup>4</sup> However, the attribute of Hoffert includes brightness, contrast (luminance, deviation), chrominance, and dominant color whereas the attribute of Applicants' claimed invention comprises information to specify *each of the video frames corresponding to each*

<sup>1</sup> Specification, page 3, line – page 4, line 1; especially see page 3, lines 15-25.

<sup>2</sup> Hoffert, column 10, line 17 – column 14, line 37.

<sup>3</sup> Hoffert, column 12, line 63 - column 13, line 12.

<sup>4</sup> Hoffert, column 13, lines 30-40.

*of the thumbnail frames* and does not describe a brightness, contrast (luminance, deviation), chrominance, and dominant color of the frame. Thus, Applicants submit that Hoffert fails to disclose or suggest attribute information comprising position information indicative of a position of the video frame corresponding to the thumbnail image on a time axis and size information of the thumbnail image as recited in Applicants amended independent claims.

With respect to independent Claims 9, 12, 15, 16, 22, and 25, Applicants traverse the finding that Hoffert discloses retrieving the thumbnail frame having the closest first position information to a second position information indicative of a position on the time axis of a desired video frame of the predetermined video information. Instead, Applicants submit Hoffert discloses a frame iteration algorithm which merely selects another frame by iteratively selecting frames between the frame in question and the other frames until a frame is found which meets predetermined criteria.<sup>5</sup> Thus, for another reason, Applicants submit that Hoffert fails to disclose or suggest sampling video information with a variable time interval parameter and a variable size parameter so as to obtain thumbnail frames.

As none of the cited prior art, individually or in combination, disclose or suggest all the elements of independent Claims 1, 9, 12, 15, 16, 22, and 25, Applicants submit the inventions defined by Claims 1, 9, 12, 15, 16, 22, and 25, and all claims depending therefrom, are not rendered obvious by the asserted prior art for at least the reasons stated above.<sup>6</sup>

With respect to Claims 19 and 28, Applicants' traverse the finding that 1) Hoffert discloses every limitation recited in Applicants' claims other than a limitation of reproducing the original video frames at a variable speed or changing a reproduction speed of the thumbnail frames according to the frame change value information and 2) Lee discloses an

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<sup>5</sup> Hoffert, column 14, lines 17-37.

<sup>6</sup> MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

improved speed change reproduction apparatus.<sup>7</sup> In Applicants' claimed inventions, the frame change value information 203 is information indicative of a frame change value between two frames.<sup>8</sup> However, the frame rate of Hoffert does not correspond to the frame change value information 203. Further, Hoffert does not teach a speed change reproduction. Therefore, Applicants submit there is no teaching, suggestion, or motivation, either explicitly or implicitly, in either reference to combine the frame rate of Hoffert with the speed change reproduction apparatus of Lee to arrive at Applicants' inventions recited in Claims 19 and 28. Thus, Applicants submit it is only through an impermissible hindsight reconstruction of Applicants' invention that the rejection of Claims 19 and 28 can be understood.<sup>9</sup> Thus, Applicants submit the inventions defined by Claims 19 and 28, and all claims depending therefrom, are improperly rejected in view of the cited references.

Accordingly, in view of the present amendment and in light of the previous discussion, Applicants respectfully submit that the present application is in condition for allowance and respectfully request an early and favorable action to that effect.

Respectfully submitted,

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<sup>7</sup> Lee, column 4, lines 20-29.

<sup>8</sup> Specification, page 30, lines 4-7.

<sup>9</sup> MPEP § 2143.01 "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge of one of ordinary skill in the art."